2.34 Speed Drills: Percentages and Proportion: 30-minute Pack

Total Marks

GL ASSESSMENT EP.M33 · Calculators not allowed · about 30 minutes

Name: _____ Date: ____ / ____ / _____

A timed speed-drill pack for building fast, accurate percentages and proportion skills - the mental fluency that keeps working quick enough for the real GL Assessment 11+ maths paper. Complete each block against its own 5-minute target without a calculator, writing only the final answer in the answer grid provided; no working space is given or needed. There are 4 blocks of 20 one-mark, answer-only questions: Block 1, percentage of an amount built from the 50%, 25%, 10%, 5% and 1% building blocks; Block 2, percentage increase and decrease, including reverse percentage problems; Block 3, sharing amounts in a ratio and simplifying ratios; Block 4, a mixed block of direct and inverse proportion against the clock. Each block carries its own Target: 5 minutes heading; time yourself (or ask an adult to time you) and note how close you get to the target on each block.

1 Work out 90% of 150.

(1)

2 Work out 24% of 250.

(1)

3 Work out 10% of 90.

(1)

4 Work out 17.5% of 240.

(1)

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5 Increase 40 by 50%.

(1)

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6 Decrease £120 by 20%.

(1)

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7 A water bottle holds 400 ml. A larger bottle holds 30% more. Find its capacity.

(1)

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8 Work out 50% of 36.

(1)

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9 A journey normally takes 50 minutes. Roadworks add 12% to the journey time. Find the new time.

(1)

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10 Find the new value when 140 is increased by 30%.

(1)

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11 A concert ticket costs £55. It is reduced by 20% for students. Find the student price.

(1)

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12 A population of 250 increases by 12%. Find the new population.

(1)

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13 A stock of 360 pens decreases by 25% after a clearance sale. Find how many remain.

(1)

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14 £80 is increased by 45%. Find the new amount.

(1)

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15 £180 is decreased by 35%. Find the new amount.

(1)

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16 A trainer's price is increased by 20% to £96. Find the original price.

(1)

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17 Work out 25% of 60.

(1)

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18 A shop increases the price of a games console by 8% to £486. Find the original price.

(1)

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19 Simplify the ratio 8 : 20 to its simplest form.

(1)

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20 Simplify the ratio 24 : 36 to its simplest form.

(1)

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21 Share 28 sweets between two friends in the ratio 3 : 4. Find the smaller share.

(1)

---

22 Share £54 between two workers in the ratio 2 : 7. Find the larger share.

(1)

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23 Share 100 g of icing between two cakes in the ratio 3 : 2. Find the larger share.

(1)

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24 Work out 1% of 400.

(1)

---

25 Share £96 between three cousins in the ratio 1 : 2 : 5. Find the middle share.

(1)

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26 Simplify the ratio 45 : 54 to its simplest form.

(1)

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27 Simplify the ratio 5.5 : 11 to its simplest whole-number form.

(1)

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28 The angles of a triangle are in the ratio 3 : 4 : 5. Find the size of the smallest angle.

(1)

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29 Two numbers are in the ratio 4 : 7. Their sum is 88. Find the larger number.

(1)

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30 A youth orchestra has string and wind players in the ratio 7 : 3. There are 21 string players. Find the number of wind players.

(1)

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31 A fruit punch is made from orange juice, mango juice and lemonade in the ratio 5 : 3 : 2. Find the amount of mango juice in 4 litres of punch.

(1)

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32 Two amounts are shared in the ratio 5 : 9. The smaller amount is £65. Find the total amount shared.

(1)

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Mark scheme · 2.34 Speed Drills: Percentages and Proportion: 30-minute Pack

Question 1

135 cao **B1**

Answer: 135

Question 2

60 cao **B1**

Answer: 60

Question 3

9 cao **B1**

Answer: 9

Question 4

42 cao **B1**

Answer: 42

Question 5

60 cao **B1**

Answer: 60

Question 6

£96.00 cao **B1**

Answer: £96.00

Question 7

520 ml cao **B1**

Answer: 520 ml

Question 8

18 cao **B1**

Answer: 18

Question 9

56 minutes cao **B1**

Answer: 56 minutes

Question 10

182 cao **B1**

Answer: 182

Question 11

£44.00 cao **B1**

Answer: £44.00

Question 12

280 cao **B1**

Answer: 280

Question 13

270 cao **B1**

Answer: 270

Question 14

£116.00 cao **B1**

Answer: £116.00

Question 15

£117.00 cao **B1**

Answer: £117.00

Question 16

£80 cao **B1**

Answer: £80

Question 17

15 cao **B1**

Answer: 15

Question 18

£450 cao **B1**

Answer: £450

Question 19

2 : 5 oe cao **B1**

Answer: 2 : 5

Question 20

2 : 3 oe cao **B1**

Answer: 2 : 3

Question 21

12 cao **B1**

Answer: 12

Question 22

£42 cao **B1**

Answer: £42

Question 23

60 g cao **B1**

Answer: 60 g

Question 24

4 cao **B1**

Answer: 4

Question 25

£24 cao **B1**

Answer: £24

Question 26

5 : 6 oe cao **B1**

Answer: 5 : 6

Question 27

1 : 2 oe cao **B1**

Answer: 1 : 2

Question 28

45 degrees cao **B1**

Answer: 45 degrees

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Question 29

56 cao **B1**

Answer: 56

Question 30

9 cao **B1**

Answer: 9

Question 31

1.2 litres cao **B1**

Answer: 1.2 litres

Question 32

£182 cao **B1**

Answer: £182

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